

In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

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1 1. (Previously Amended) A server for a merchant computer  
2 system, the server comprising:  
3 a file store configured to store a range of audio/video  
4 products in respective product files and client history data;  
5 a dialogue unit operable to invite and receive a client  
6 selection from among the products, and to define a degrade level  
7 signal dependent upon a client integrity indicator determined from  
8 a personal client file containing client history data stored in the  
9 file store;  
10 a product reader connected to read the product files from  
11 the file store to generate a digital audio/video signal; and  
12 a signal processing unit having an input selectively  
13 connectable to receive the digital audio/video signal from the  
14 product reader, a processing core operable to apply a defined level  
15 of content degradation to the digital audio/video signal creating a  
16 degraded digital audio/video signal having a degradation in  
17 perceived quality corresponding to the defined degrade level signal  
18 of the dialogue unit, and an output connected to output the  
19 degraded digital audio/video signal.

Claims 2 to 4. (Canceled)

1 5. (Original) A server according to claim 1, wherein the  
2 processing core comprises a digital signal processor.

1 6. (Original) A server according to claim 5, the digital  
2 signal processor including a delay line structure having an input  
3 arranged to receive a bit stream derived from the digital

4 audio/video signal, noise insertion circuitry for manipulating bits  
5 of the bit stream to degrade signal quality, and an output arranged  
6 to output the manipulated bit stream.

1 7. (Previously Amended) A server according to claim 5, the  
2 digital signal processor including:

3 a discrete Fourier transform unit operable to apply a  
4 discrete Fourier transform to obtain a frequency domain  
5 representation of the digital audio/video signal;

6 a frequency modulator operable to apply a manipulation  
7 process to the frequency domain representation of the digital  
8 audio/video signal;

9 an inverse discrete Fourier transform unit operable to  
10 apply an inverse discrete Fourier transform to reconstruct a time  
11 domain representation of the digital audio/video signal;

12 wherein the manipulation process applied by the frequency  
13 modulator is such as to effect a degradation of perceived signal  
14 quality in the digital audio/video signal reconstructed by the  
15 inverse digital Fourier transform unit.

8. (Canceled)

1 9. (Currently Amended) A server according to claim 7,  
2 wherein the manipulation process includes one or more of the  
3 following: frequency band rejections, frequency low pass and  
4 frequency high pass to effect a degradation of perceived signal  
5 quality.

1 10. (Previously Amended) A server according to claim 7,  
2 wherein the manipulation process includes phase inversion over at  
3 least one range of frequency components.

1 11. (Original) A server according to claim 7, wherein the  
2 manipulation process applied by the frequency modulator is applied  
3 to digital audio signals and inserts masked sound contributions  
4 adjacent amplitude peaks of the frequency domain representation of  
5 the digital audio signal.

1 12. (Currently Amended) A server according to claim 7,  
2 further including a mixer operatively arranged before the discrete  
3 Fourier transform unit to effect a degradation of perceived signal  
4 quality.

1 13. (Currently Amended) A server according to claim 12,  
2 wherein a frequency modulator is operatively arranged between the  
3 mixer and the inverse discrete Fourier transform unit, and the  
4 manipulation process includes band-pass filtering to suppress  
5 frequency contributions lying outside a selected frequency range to  
6 effect a degradation of perceived signal quality.

1 14. (Original) A server according to claim 13, wherein the  
2 manipulation process inserts masked sound contributions adjacent  
3 the mixing frequency.

4 15. (Original) A server according to claim 5, the digital  
5 signal processor including:  
6 a frame buffer for holding frames of a digital video  
7 signal; and  
8 a frame manipulator operatively arranged to manipulate  
9 frames in the frame buffer to generate a degraded digital video  
10 signal.

1 16. (Previously Amended) A server according to claim 15,  
2 wherein the digital signal processor is configured to process

3 digital video signals conforming to an MPEG standard including as  
4 frame types I-frames, P-frames and B-frames, wherein the frame  
5 manipulator is operable to identify the frame type of frames held  
6 in the frame buffer, and operable to perform frame manipulation  
7 according to frame type so as to effect a degradation of perceived  
8 video signal quality.

1 17. (Previously Amended) A server according to claim 15,  
2 wherein the digital signal processor is configured to process  
3 digital video signals conforming to an MPEG standard including data  
4 blocks, each comprising a plurality of pixels, wherein the frame  
5 manipulator is operable to vary the pixels of the data blocks of at  
6 least selected ones of the frames so as to effect a degradation of  
7 perceived video signal quality.

1 18. (Previously Amended) A server according to claim 15,  
2 wherein the digital signal processor is configured to process  
3 digital video signals conforming to an MPEG standard including  
4 motion vectors, wherein the frame manipulator is operable to vary  
5 the motion vectors of at least selected ones of the frames so as to  
6 effect a degradation of perceived video signal quality.

1 19. (Previously Amended) A server according to claim 15,  
2 wherein the digital signal processor is configured to process  
3 digital video signals conforming to an MPEG standard including  
4 objects, wherein the frame manipulator is operable to manipulate  
5 the objects of at least selected ones of the frames so as to effect  
6 a degradation of perceived video signal quality.

1 20. (Previously Amended) A server according to claim 1,  
2 wherein the processing core is operable to process a multi-channel  
3 digital audio signal by switching individual channels within the

4 multi-channel signal to apply spatial modification to the digital  
5 audio signal so as to effect a degradation of perceived digital  
6 audio signal quality.

1 21. (Previously Amended) A server according to claim 1,  
2 wherein the processing core is operable to process a multi-channel  
3 digital audio signal by inverting the phase of at least one of the  
4 audio channels so as to effect a degradation of perceived digital  
5 audio signal quality.

1 22. (Previously Amended) A server according to claim 1,  
2 wherein the processing core is operable to process a multi-channel  
3 digital audio/video signal by adding together individual ones of  
4 the channels so as to effect a degradation of perceived digital  
5 audio/video signal quality.

1 23. (Previously Amended) A server according to claim 1,  
2 wherein the processing core is operable to process a multi-channel  
3 digital audio/video signal by removal or attenuation of at least  
4 one of the channels so as to effect a degradation of perceived  
5 digital audio/video signal quality.

1 24. (Previously Amended) A server according to claim 1,  
2 wherein the digital audio/video signal comprises an n-bit digital  
3 audio signal and the processing core is operable to convert the n-  
4 bit digital audio signal into an m-bit digital audio signal where m  
5 is less than n so as to effect a degradation of perceived digital  
6 audio signal quality.

1 25. (Previously Amended) A server according to claim 1,  
2 wherein the processing core is operable to time modulate the

3 digital audio/video signal so as to effect a degradation of  
4 perceived digital audio signal quality.

5 26. (Original) A server according to claim 25, wherein the  
6 time modulation is one or more of:

7 a speed-up or slow-down the digital audio/video signal;

8 a change in the value of data bits in volume, luminance

9 or chrominance data contained within the digital audio/video  
10 signal; and

11 a lengthening of a sampling period of the digital  
12 audio/video signal.

1 27. (Previously Amended) A server according to claim 1,  
2 wherein the processing core comprises:

3 a first data converter arranged as an input stage to  
4 convert the digital audio/video signal into an analog audio/video  
5 signal;

6 an analog processing unit operable to apply a defined  
7 level of audio/video degradation to the analog signal creating a  
8 degraded analog audio signal having a degradation in perceived  
9 quality corresponding to said defined level of content degradation;

10 a second data converter arranged as an output stage to  
11 convert the degraded analog signal into a degraded digital  
12 audio/video signal for output.

1 28. (Previously Amended) A server according to claim 27,  
2 wherein the analog processing unit is operable to apply frequency  
3 domain modulation to an analog audio signal so as to effect a  
4 degradation of perceived audio signal quality.

1 29. (Currently Amended) A server according to claim 28,  
2 wherein the frequency domain modulation is one or more of: band-

3 reject filtering, low-pass filtering, high-pass filtering and  
4 frequency-selective phase inversion to effect a degradation of  
5 perceived signal quality.

1 30. (Previously Amended) A server according to claim 1,  
2 wherein the processing core comprises a mixer for adding a  
3 secondary signal to the digital audio/video signal so as to effect  
4 a degradation of perceived digital audio/video signal quality.

1 31. (Original) A server according to claim 30, wherein the  
2 signal processing unit further comprises a signal generator for  
3 generating the secondary signal.

1 32. (Original) A server according to claim 31, wherein the  
2 signal generator is operable as a noise generator.

1 33. (Original) A server according to claim 31, wherein the  
2 signal generator is operable to generate a content-based audio  
3 signal.

1 34. (Previously Amended) A server according to claim 30,  
2 wherein the dialogue unit is operable to generate a degrade level  
3 signal, the signal processing unit having a degrade level signal  
4 input for receiving a degrade level signal from the dialogue unit  
5 and wherein the level of the secondary signal mixed with the  
6 digital audio/video signal is determined by the degrade level  
7 signal.

1 35. (Previously Amended) A method of operating a server of a  
2 merchant computer system, the method comprising:  
3 inviting a client to make a selection from a range of  
4 audio/video products stored by the server in product files;

5 receiving a client selection for evaluation of one of the  
6 products;  
7 reading the selected product file to generate a digital  
8 audio/video signal;  
9 defining a level of content degradation dependent on a  
10 client integrity indicator determined from a personal client file  
11 containing client history data;  
12 applying the defined level of content degradation to the  
13 digital audio/video signal to generate a degraded digital  
14 audio/video signal having a degradation in perceived quality  
15 corresponding to said defined level of content degradation; and  
16 outputting the degraded digital audio/video signal to the  
17 client.

Claim 36. (Canceled)

1 37. (Currently Amended) A method of operating a server of a  
2 merchant computer system, the method comprising:  
3 inviting a client to make a selection from a range of  
4 audio/video products stored by the server in product files;  
5 receiving a client selection for evaluation of one of the  
6 products;  
7 reading the selected product file to generate a digital  
8 audio/video signal;  
9 defining a level of content degradation dependent on an  
10 authorization response received by the server from a remote payment  
11 gateway computer system following an authorization request by the  
12 server including a client i.d., a client payment instrument and a  
13 monetary value of the product selected for evaluation by  
14 the server transmitting to the client a request for  
15 identification of type of payment authorization,



16           the client transmitting to the server identification of a  
17           type of payment authorization,  
18           defining at the server a level of content degradation as  
19           a function of the identified type of payment authorization;  
20           applying the defined level of content degradation to the  
21 digital audio/video signal to generate a degraded digital  
22 audio/video signal having a degradation in perceived quality  
23 corresponding to said defined level of content degradation; and  
24           outputting the degraded digital audio/video signal to the  
25 client.

1 38.           (Original) A method according to claim 35, utilizing a  
2 digital signal processor to apply the defined level of content  
3 degradation to the digital data stream.

1 39.           (Currently Amended) A method of communicating between a  
2 client, server and gateway on a computer network, the method  
3 comprising:  
4           a) the client establishing communication with the server to  
5 identify the client and a client payment instrument to the server;  
6           b) the server transmitting to the client a range of  
7 audio/video products for supply in return for payment;  
8           c) the client transmitting to the server an evaluation  
9 request for one of the products;  
10           d) the server and gateway communicating to obtain payment  
11 authorization for the requested product from the payment  
12 instrument;  
13           e) the server defining a level of content degradation as a  
14 function of client history;  
15           f) the server transmitting to the client a degraded  
16 evaluation version of the selected product without payment  
17 authorization, the degraded evaluation version of the selected

18 product having a degraded perceived quality corresponding to the  
19 level of content degradation;  
20 g) the client transmitting to the server a payment decision;  
21 h) the server and gateway communicating to effect payment  
22 capture for the authorized payment; and  
23 i) the server transmitting to the client a non-degraded  
24 version of the selected product.

40. (Canceled)

41. (Previously Amended) A method of communicating between a  
client, server and gateway on a computer network, the method  
comprising:  
a) the client establishing communication with the server to  
identify the client and a client payment instrument to the server;  
b) the server transmitting to the client a range of  
audio/video products for supply in return for payment;  
c) the client transmitting to the server an evaluation  
request for one of the products;  
d) the server and gateway communicating to obtain payment  
authorization for the requested product from the payment  
instrument;  
e) the server defining a level of content degradation as a  
function of said client payment instrument;  
f) the server transmitting to the client a degraded  
evaluation version of the selected product without payment  
authorization, the degraded evaluation version of the selected  
product having a degraded perceived quality corresponding to the  
level of content degradation;  
g) the client transmitting to the server a payment decision;  
h) the server and gateway communicating to effect payment  
capture for the authorized payment; and

23 i) the server transmitting to the client a non-degraded  
24 version of the selected product.

1 42. (Previously Amended) A server apparatus comprising:

2 means for supplying a range of audio/video products as  
3 respective digital audio/video signals;

4 means for inviting and receiving a client selection from  
5 among the products via a network connection;

6 means for defining a level of content degradation as a  
7 function of client history;

8 means for processing the digital audio/video signal  
9 associated with the selected product to apply the defined level of  
10 content degradation thereto; and

11 means for outputting the degraded digital audio/video  
12 signal to the network connection, the degraded digital audio/video  
13 signal having a degraded perceived quality corresponding to the  
14 defined level of content degradation, whereby a degraded version of  
15 the selected product is supplied to the client.

1 43. (Previously Amended) A merchant computer system  
2 comprising a server and a client interconnectable over a network,  
3 wherein the server comprises:

4 a file store configured to store a range of audio/video  
5 products in respective product files;

6 a dialogue unit having a network connection and operable  
7 to invite and receive a client selection from among the products  
8 via the network connection, and to define a level of content  
9 degradation dependent upon a client integrity indicator determined  
10 from a personal client file containing client history data stored  
11 in the file store;

12 a product reader connected to read the product files from  
13 the file store to generate a digital audio/video signal; and

14 a signal processing unit having an input connectable to  
15 receive the digital audio/video signal from the product reader, a  
16 processing core operable to apply a defined level of content  
17 degradation to the digital audio/video signal creating a degraded  
18 digital audio/video signal having a degradation in perceived  
19 quality corresponding to said defined level of content degradation  
20 of the dialogue unit, and an output connected to output the  
21 degraded digital audio/video signal from the processing core to the  
22 network connection.

1 44 (Original) The system of claim 43, wherein the client  
2 comprises an audio/video reproduction system operable to play the  
3 audio/video product communicated by way of the digital audio/video  
4 signal.

1 45. (Original) The system of claim 43, the server further  
2 including an output stage operatively arranged between the output  
3 of the signal processing unit and the network connection, the  
4 output stage having a packetizer for sub-dividing the degraded  
5 digital audio/video signal into encrypted data packets and  
6 associating decryption keys with each encrypted data packet, the  
7 dialogue unit being operable to supply a packet decoder to the  
8 client over the network for decoding the digital video/audio  
9 signal, and wherein the client includes an input stage connected to  
10 receive the packet decoder and load the packet decoder into a  
11 decoder host, the client input stage further comprising an input  
12 connected to receive the data packets and supply the data packets  
13 to the decoder host for packetwise decoding by applying the packet  
14 decoder with the associated decryption key of the data packet  
15 concerned, wherein the client input stage is configured to corrupt  
16 the decryption key of any given data packet before the decoded data

17 of that packet is transmitted from the input stage in a form  
18 playable by the reproduction system.

1 46. (Currently Amended) A method of communicating between a  
2 client, server and gateway on a computer network, the method  
3 comprising:

4 a) the client establishing communication with the server to  
5 identify the client;

6 b) the server transmitting to the client a range of  
7 audio/video products for supply in return for payment;

8 c) the client transmitting to the server an evaluation  
9 request for one of the products;

10 d) the server transmitting to the client a degraded  
11 evaluation version of the selected product without payment  
12 authorization, the degraded evaluation version of the selected  
13 product having a degraded perceived quality;

14 e) performing steps b) through d) at least once;

15 f) the client transmitting to the server a purchase decision  
16 and payment instrument;

17 g) the server and gateway communicating to obtain payment  
18 authorization for the requested product from the payment  
19 instrument;

20 h) the server and gateway communicating to effect payment  
21 capture for the authorized payment; and

22 i) the server transmitting to the client a non-degraded  
23 version of the selected product.

Claims 47 and 48. (Canceled)